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WE, GEORGE Y. WU and CATHERINE H. WU, citizens of the United States, both having a post office address at 52 Ridgebury Road, Avon, Connecticut, 06001, have made an invention in

PROPAGATION OF HUMAN HEPATOCYTES IN NON-HUMAN ANIMALS

of which the following is a

SPECIFICATION

[0001] The subject matter herein was generated at least in part under National Institute of Diabetes and Digestive and Kidney Diseases ("NIDDK") Grant No. DK-42182, such that the United States Government has certain rights herein.

[0002] This patent application is a continuation-in-part of International Patent Application No. PCT/US00/05713 filed March 3, 2000 and published in English, which claims priority as a continuation-in-part of United States Patent Application No. 09/431,901 filed November 2, 1999, now U.S. Patent No. 6,525,242.

1. INTRODUCTION

[0003] The present invention relates to the propagation of human hepatocytes in the livers of non-human animals that have been tolerized to the human cells. Such animals provide an in vivo model system of the human liver that may be used in toxicology assays and in the study of human liver diseases, including the various forms of hepatitis (in particular hepatitis B and C) and alcohol - induced liver degeneration. They may also be used as a source of human hepatocytes for reconstitution of liver tissue, thereby providing an alternative to liver transplantation.